4-12-1982

The Shower Soaper

Nick E. Kreigh
Indiana University - Purdue University Fort Wayne

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For

Dr. Warren W. Worthley
Department Chairman
Manufacturing Technology
Indiana-Purdue University at Fort Wayne

By: Nick E. Kreigh

ABSTRACT

Sales in the millions for pulsating shower heads prove that the public will buy a device which makes taking a shower more convenient and luxurious whil saving water. Thus the inexpensive, easy-to-install Shower Soaper has a tremendous market potential.

The Shower Soaper is a device which can mix a wide range of liquids (soaps, bath oils, or shampoos) with shower water. The Soaper incorporates an easy-off valve which allows the user to save water whether or not a pulsating head is also used. The Soaper has 6 main components: a diverting valve, a jet pump, a restricting valve, a soap container, a soap nozzle, and a flow control valve. When in use, the Soaper diverts water through the jet pump, creating a partial vacuum which draws soap up and mixes it with shower water. The user can reduce the water flow to a trickle by closing the Soaper's flow control valve.

A full-scale working prototype has been built and tested. All parts of the prototype were purchased from plumbing suppliers. The tests confirmed all calculation and computer estimations. The Soaper's test program included testing with varying viscosity liquids at different water pressures, hardnesses, and temperatures and testing for ease of operation and installation. The Soaper did perform excellently on all tests. The prototype tested cost $115; the estimated production cost is $10.

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